

9. Walter

Program Name: Walter.java

Input File: walter.dat

Walter works at a mail center and must decide how to mail certain items brought in by customers, according to the dimensions of the item, from small post cards to large packages. Some items don't fit any of the categories and are unmailable. If an item somehow fits into two categories, the larger one is to be used.

Below are the category descriptions that Walter can choose from. All given dimension ranges are inclusive and expressed in inches.

SMALL POST CARD: Length must be between 3.5 and 4.25, width between 3.5 and 6, and thickness between .007 and .016.

LARGE POST CARD: Length between 4.25 and 6, width between 6 and 11.5, thickness between .007 and .016.

SMALL ENVELOPE: Length - 3.5 to 6.125, width - 5 to 11.5, thickness - .016 to .25.

LARGE ENVELOPE: Length - 6.125 to 24, width - 11 to 18, thickness - .25 to .5.

SMALL PACKAGE: Item dimensions must exceed all rules for large envelope and the length plus the distance around the sides of the package other than the length equals 84 inches or less.

LARGE PACKAGE: Length plus distance around the other sides of the package exceeds 84 inches but is no more than 130 inches.

Input: Several data sets, each on one line, consisting of the three values of a mail item: length, width, thickness.

Output: The correct mail classification (in all caps) according to the specifications listed above, or the word UNMAILABLE if the item does not fit within any of the descriptions.

Sample Input:

```
4 4 .009
5 7 .013
5 7 .2
10 12 .4
20 20 40
```

Sample Output:

```
SMALL POST CARD
LARGE POST CARD
SMALL ENVELOPE
LARGE ENVELOPE
UNMAILABLE
```